Replace the paragraph beginning at page 8, line 27 with the following rewritten paragraph:

-- Both Fig. 1a and Fig. 1b illustrate exemplary structures of transmission paths that may be encountered when trying to establish a connection between two subscribers of a transmission network wherein at least one of the two subscribers is connected to the network through a digital line portion such as ISDN. Depending on the structure encountered on the transmission path between the subscribers, they may agree upon a certain transmission scheme allowing a bit rate as high as possible for the encountered structure. Known transmission schemes are ITU-T V.34 using quadrature amplitude modulation on analogue transmission paths and ITU-T V.90 using pulse amplitude modulation on transmission paths having both analogue and digital line portions. Further, pulse amplitude modulation according to ITU-T V.90 can also be used as a transmission scheme on all-digital transmission paths. --

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Replace the paragraph beginning at page 9, line 8 with the following rewritten paragraph:

-- Fig. 2 is a diagram of a probing signal of the first embodiment of the invention. The probing signal is transmitted by the first subscriber terminal 1. Fig. 2 also shows a signal received by the second subscriber terminal 8 in the presence of a digital impairment device 5 introducing ADPCM to the signal transmission path between the first subscriber and the second subscriber. Terminal 1 sends 80 digital symbols of equal value in a first frame and then sends 80 digital symbols of the same absolute value, however, being negative in sign. The probing signal consists of a plurality of frame pairs as illustrated in Fig. 2 subsequently transmitted by the first terminal 1. --

Replace the paragraph beginning at page 10, line 9 with the following rewritten paragraph:

-- Sequence (b) of Fig. 3 shows the signal received by subscriber terminal 8 (Modem 2) in the case of an all-digital, fully, transparent connection. Thus the frame sent by modem 1 is received by modem 2 with identical symbols, merely displaced in time. This case allows establishment of a PCM transmission scheme between modem 1 and modem 2. Sequence (b) through (g) show received signals in the presence of digital impairments. Sequence (c) assumes an impairment of digital padding, i.e. the digital signal is attenuated. Thus the pulse symbol in the original probing sequence (a) is

a3